

Project B-231

AN ANALYSIS OF MANUFACTURING OPERATIONS  
IN ELBERT COUNTY

Technical Report No. 1

by  
M. Dale Henson  
and  
Robert H. McDonough

Industrial Development Division  
Engineering Experiment Station  
GEORGIA INSTITUTE OF TECHNOLOGY  
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## Summary

1. Since abundant granite deposits represent the only unique resource in the area, the most promising potential for industrial growth in Elbert County lies in the expansion and diversification of the existing granite industry. This growth program should be based on a detailed research study -- such as that now pending before the Area Redevelopment Administration -- of the properties and potentialities of Elbert County granite. It is recommended that immediate steps be taken to implement the research program, with initial efforts directed toward the solution of problems in the areas of quality standards, product standardization, and market expansion.

2. Granite is the only industry in Elbert County of sufficient size and purchasing capability to support new satellite and service industries. Quantitative evidence indicates that the following warrant further study as possible manufacturing opportunities in Elbert County:

- a. Abrasive grains -- Elbert County granite industry purchases of silicon carbide and aluminum oxide totaled almost \$1,000,000 during 1961.
- b. Abrasive wheels -- The market for this item includes a number of industries and should encompass the Southeast. The dollar value of purchases in the Elbert County area approached \$200,000 in 1961.
- c. Stone sawing strand -- The 12,000,000 feet purchased by the Elbert County granite industry in 1961 came largely from sources outside the Southeast. The possibility of establishing facilities for the twisting of this wire in Elberton should be explored.
- d. Service industries -- There is evidence that a need exists for electric motor repair and machine shop facilities with wider capabilities than the granite manufacturers are providing for themselves. The specific needs should be identified to determine if the demand will support independent shops.

3. No "natural" diversification or expansion possibilities exist in the non-granite industries in Elbert County. The largest non-granite employers

are branch operations and, as such, their productive capacity requirements are determined by the home office consistent with the needs of the entire organization.

4. There are no satellite or service potentials evident in the non-granite industries in Elbert County. The large firms rely on central purchasing by parent plants, and no firm or group of firms in any industrial line requires a volume of raw materials sufficient to justify considering the establishment of a supplier facility.

5. Based on the above findings, it is concluded that the best potential for industrial growth outside of the granite industry lies in the attraction of industries that are unrelated to those now operating in Elbert County.

## INTRODUCTION

The purpose of this study is to evaluate the industrial potential of Elbert County, based on an audit of existing manufacturing operations and a consideration of the feasibility of bringing in satellite or service industries or diversifying the existing ones.

As a first step in accomplishing this purpose, a survey was made of the manufacturing activities in Elbert County. All firms in non-granite industries were surveyed individually, and a case history was developed on each. Because of the heavy concentration of similar firms in the granite industry, the survey of granite manufacturers was limited to a selected sample. This was supplemented by discussions with granite industry representatives regarding the potential supply, service and satellite needs of the industry and by personal interviews with suppliers to the local granite industry to identify types and quantities of materials, supplies and services used.

The data accumulated in auditing the existing manufacturing operations were analyzed and synthesized to develop a profile of manufacturing activities in Elbert County in terms of the overall industry composition and characteristics, the employment and labor supply situation, sources of materials, supplies and services, production capabilities, and sales and distribution patterns. The Elbert County industrial profile is presented in the last section of this report. Individual case studies are excluded to avoid disclosure of restricted or confidential information.

From the analysis of manufacturing data, an evaluation was made of the feasibility of developing specific satellite and service industries or diversifying or expanding existing firms. Because of the size and nature of the granite industry, development possibilities in the granite and non-granite industries were considered separately. While offering perhaps the best source of economic growth for Elbert County, diversification and expansion potentialities in the granite industry were not explored in detail since this phase is covered by a pending proposal for an Area Redevelopment Administration technical assistance grant.



## FINDINGS AND CONCLUSIONS

### Diversification and Expansion of Non-granite Industries

An analysis of the non-granite industries in Elbert County reveals no "natural" diversification or expansion possibilities. Should economic conditions change or strengthen the demand for locally produced items, expansion would come as a natural result -- provided top management agreed that the Elbert County plant would be the logical one to fill the enlarged orders. The largest employers in the non-granite industries -- Elberton Manufacturing Company, Elberton Mills and Wright Garment Company -- are branch operations and, as such, their productive capacity requirements are determined by the home office consistent with the needs of the entire organization. It was recently announced, for example, that an expansion program is under way at the headquarters plant of Wright Garment Company in Toccoa. The decision to expand the Toccoa plant rather than the Bowman plant was one over which the local management had little or no control.

A degree of caution should be exercised in examining expansion possibilities in poultry-oriented industries, the second largest non-granite employer group in the county. With the recent increase in import duties on broilers to the Common Market countries, a major export market has been seriously impaired. Since about 75% of the 154 million pounds of poultry meat exported during the first half of 1962 went to the Common Market countries, the duty increase will be felt very quickly among poultry producers. It is estimated by exporters that shipments to the Common Market countries have declined by 50% since the rise in import duties on August 1. This recent act, coupled with the excess capacity of the industry in general, should encourage a careful analysis of current conditions before expansion and/or diversification decisions are made. The retrenchment program of Southern Poultry Company at Fortsonia is indicative of the position in which the poultry industry has found itself.

The small lumber industry in Elbert County must depend directly upon local activity for its prosperity. A review of conditions necessary for the establishment of plants to manufacture allied products, such as hardboard and insulation board and furniture, does not reveal any strong possibilities.

### Satellite and Service Potentials in Non-granite Industries

Due to the relative narrow industrial base in the county and to the organizational structure of the large firms, there are no evident satellite or service potentials in the non-granite industries. No firm or group of firms in the same industry requires a volume of raw materials that would justify considering the establishment of a facility to act as supplier. The large firms rely on central purchasing by parent plants to provide materials and supplies at considerably lower cost than they themselves could obtain. For the most part, only miscellaneous low-cost items are purchased locally. Services are either provided by the parent plant or are obtained locally.

### Diversification and Expansion in Granite Industry

Diversification possibilities in the granite industry are extremely promising, but a comprehensive research program is required to ferret out new uses for this valuable resource. A proposal for such a program is now pending before the Area Redevelopment Administration of the U. S. Department of Commerce. Initiated by the Industrial Development Division of Georgia Tech's Engineering Experiment Station, this proposal outlines a complete program to explore new or improved methods of processing and marketing granite products and to develop possible new uses for the granite resources in Elbert County. The local granite industry, represented by the Elberton Granite Association, has agreed to underwrite the cost of almost one-fourth of the project, and it is proposed that the Area Redevelopment Administration provide the remaining financial support.

The research proposal outlines two major research and development activities. The first phase relates to the manufacturing, management and marketing methods in the Elbert County granite industry. The second proposes to analyze and evaluate the properties and potentialities of Elbert County granite, to improve the quality of existing granite products, and to develop new products and processes.

It is recommended that immediate steps be taken to implement the program under the first research activity. This could be done on a limited basis until the full research proposal is approved. Immediate benefits could accrue to the industry through the application of the results of these research efforts. The particular areas to be explored include the following:

- (1) Quality standards: Investigate the possibility of modifying standards to permit the more complete utilization of granite resources.
- (2) Product standardization: Evaluate the feasibility of standardizing the product line in the industry to permit more efficient production-line processing and to simplify inventory, cost control and record keeping problems.
- (3) Market studies: Study the growth potential of the granite industry, with emphasis on the effect of "no-monument" cemeteries on demand for granite monuments. Conduct market studies to determine the commercial feasibility of new product developments and new uses of granite in the construction field.

#### Satellite and Service Potentials in the Granite Industry

There are possibilities for the establishment of satellite and service industries to the granite industry. Detailed analysis of the various products consumed by the industry indicate that the following supplies warrant further study as potential Elbert County manufactured goods:

(1) Abrasive grains: Elbert County granite industry purchases of silicon carbide and aluminum oxide totaled almost \$1,000,000 during 1961. In 1957, the latest year for which reliable production figures are available, the U. S. manufactured 33,000 short tons of silicon carbide and imported 67,048 short tons. In the same year 9,758 short tons of aluminum oxide were produced and 155,387 short tons imported.

Manufacture of these two artificial abrasives is generally confined to those areas where a plentiful supply of electric power is available at low cost. Various sites in Canada apparently meet this qualification; at least eight plants in Canada produce and export several times the volume of U. S. production. Manufacturing facilities in the U. S. are located at Niagara Falls, New York, Vancouver, Washington, and Huntsville, Alabama.

Further marketing and production requirement studies are necessary before conclusive decisions can be made as to the feasibility of manufacturing these abrasives in Elbert County.

(2) Abrasive wheels: Estimates, based on Census of Manufactures statistics, put total southern production of abrasive wheels at slightly

over \$400,000 in 1958. According to data provided by the major granite supply houses in Elberton, the dollar value of purchases of this item in the Elbert County area alone approaches \$200,000. Even after taking into consideration possible differences in methods of pricing, it is apparent that the South must import abrasive wheels from other areas of the U. S. This is substantiated by reports that many of the supply houses purchase abrasive wheels from manufacturers in New York and Massachusetts.

Consumers of abrasive wheels, in addition to the granite industry, include other stone processors, foundries, machine shops, and automobile repair shops and garages. Thus, the market for this product should include a number of industries and, geographically, should encompass at least the Southeast.

As with abrasive grains, further market and plant location studies are necessary to determine whether abrasive wheel production is feasible as a local manufacturing venture.

(3) Stone sawing strand: This is the second largest dollar purchase of supplies made by the granite industry in 1961. Most of the wire came from large metal producing centers in the Midwest. The Southwire Company in Carrollton has been contacted by granite industry representatives regarding the possibility of establishing a branch operation for the fabrication of this wire in Elberton. It is recommended that this possibility be further explored.

(4) Service industries. There is some evidence that present machine shop facilities are not adequate to service the granite industry's needs. Some of the larger manufacturers have their own machine shops for miscellaneous internal repair work, but discussions with a representative group indicate that, in general, the capabilities are severely limited. Whether the demand is great enough to support an independent machine shop in Elberton is not known but should be explored.

An existing electric motor repair shop in Elberton serves some firms in the granite industry. Some manufacturers are satisfied with the service, but others take their motors to Anderson, South Carolina, rather than try to schedule the services of the local firm. A local survey should be made to determine the needs in this area.

### Manufacturing Opportunities Unrelated to Existing Industry

Since the existing industrial base of Elbert County is relatively narrow, the obvious route to a diversified county industrial complex is the attraction of industries that are completely unrelated to those now operating in Elbert County.

It would not be feasible to attempt to list those specific products that might profitably be manufactured in Elbert County. It is possible, however, to discuss in general terms the characteristics of those firms that would likely thrive in Elbert County -- based for the most part on the experience of existing firms in the county.

It is no secret that many firms come South in order to avoid restrictive labor union practices. The plentiful supply of relatively low-wage labor is an attractive factor, but in many cases the move is determined by the added enticement of freedom from labor unions. The presence of labor unions in the granite, apparel and textile industries in Elbert County can be considered as a deterrent to the attraction of those plants that arbitrarily avoid locations in which labor unions exist.

Those industries in which labor cost is a critical factor and in which high initial skills are not required are likely prospects for Elbert County. The workers, especially women, should be easily adaptable to an industrial environment in which the products are standard and are mass-produced for a large market. The remarkable stability of the labor force is another desirable characteristic commented on by several of the existing firms.

## ELBERT COUNTY INDUSTRIAL PROFILE

### Industry Composition and Characteristics

The granite industry dominates the industrial structure of Elbert County, accounting for 56% of the more than 2,400 industrial employees. This includes only those workers directly employed in the quarrying and manufacturing operations and in the custom polishing and sawing shops. In addition to these, the number of workers in the county who are dependent upon the granite industry for their livelihood is enlarged by the employment demands of six supply houses, three monument design firms and four trucking companies. A firm was recently formed to manufacture steel shot, which is used as an abrasive in the cutting operations. Tentative plans have been made to expand the scope of operations of this plant to include the production of silicon carbide and aluminum oxide. Thus, it is conservatively estimated that 70% of the non-farm wage earners in Elbert County are dependent on the granite industry as a source of income.

Only 13 of the 97 companies in the granite business or its service fields employ more than 25 employees. This reflects the degree of dispersion of ownership in the industry: most of the companies are owner-managed.

The second largest manufacturing employer in Elbert County is the apparel industry. The two firms in this industry provide jobs for approximately 600 women and 30 men -- easily the top employers of women among Elbert County industries. Wright Garment Company in Bowman produces men's and boys' trousers, primarily polished cotton, while the second firm, Elberton Manufacturing Company, concentrates on women's blouses, sportswear and skirts.

Both of these firms are relatively new in the county. Wright Garment Company, a branch plant with company headquarters in Toccoa, was established in Bowman in 1945. The Elberton Development Corporation was largely responsible for the establishment of Elberton Manufacturing Company in 1955.

Although represented by only one firm (Elberton Mills), the textile industry is the third largest employer in Elbert County. This plant is one of nine in the Fabric Production Division of United Merchants and Manufacturers, Inc. Headquarters for this company is in Wilmington, Delaware. The physical facilities were purchased from Susquehanna Silk Mills in 1941, and Elberton

Mills has been in continuous operation since that time. The products are drapery and upholstery fabrics.

The food industry consists of seven firms with approximately 75 employees. Three of these are in the poultry business -- two feed producers and one small poultry packaging plant. The two feed producers are branch operations of large integrated poultry processors with other supporting plants -- hatcheries and feed mills -- and home offices located outside Elbert County. Due to depressed conditions in the industry, one of the feed producers is strongly considering the closing of the Elbert County operation. Both of the feed plants were established within the past five years. The poultry packaging plant was established in 1960.

Two of the seven food industry firms are soft drink bottlers. They were not included in this survey due to the special nature of this industry. A meat packing plant and a wheat flour and corn meal producer complete the list of companies engaged in manufacturing in the food industry. The grain mill also processes feed for swine and cattle.

The lumber industry trails in terms of number employed. There are two firms primarily engaged in sawing and planing lumber from logs. One of these carries a complete line of building materials and builds truck bodies in addition to the sawing and planing operations. The second, a smaller firm, is primarily a planing mill.

#### Employment and Labor Supply

Granite Industry. Of the approximately 1,350 employees in the quarrying, manufacturing and custom sawing operations of the granite industry, only 85 are women. That female employment is confined to clerical and secretarial positions, except for a few jobs in design service, is no surprise considering the nature of the industry. But it does create an imbalance in the county's employment composition that should be balanced with firms that employ mostly females.

There are very few formally trained technicians in the granite industry. Most of the manufacturing firms employ draftsmen, but few are professionals, having developed their skills on the job under the direction of those who gained their competence in a like manner. Some of the larger manufacturers

also have monument designers on their staffs, but most rely on services offered by a professional designer in Elberton.

The bulk of the granite industry employees are directly engaged in the quarrying and monument manufacturing operations. The most highly skilled jobs in the plants are those of polisher, stone cutter, and sandblast carver. The skills are acquired either through service as an apprentice or through on-the-job training programs. Although the granite firms were not surveyed as to their personnel requirements, the general impression is that the present labor supply is adequate but that shortages may develop in the higher skilled jobs due to a diminishing interest in apprenticeship training.

Apparel and Textile Industries. Eighty-five per cent of the employees in the three apparel and textile firms are women, counterbalancing to some extent the preponderance of men in the granite industry. There are less than one-half dozen employees in these firms that are classified as technical and/or professional. Most of these are laboratory technicians in the chemical laboratories of the textile firm.

There are conflicting reports regarding the adequacy of labor supply in the apparel and textile industry. Two of the firms report no trouble at all in manpower recruitment. These firms train their own mechanics as well as production workers and are completely satisfied with the quality of workers in the area. One manager stated that it had never taken over two weeks to fill any position, including supervisory. The third firm, however, strongly emphasized the shortage of female workers in the area. The manager's analysis of the problem was that the young men are leaving the county in search of jobs, taking their wives -- potential or actual workers at his plant -- with them. If jobs could be provided for the young men, he feels his labor troubles would come to an end.

The quality of the labor force is rated very high by all representatives of this industry. The workers are eager to learn, conscientious, easily trained, dependable and, as a general rule, have outstanding job attitudes.

Employees in two of the firms are represented by labor unions -- United Textile Workers of America, AFL-CIO and International Ladies' Garment Workers of America. Approximately 50% of the eligible employees in each firm are members.



Food Industry. Employment in all food industry firms except the soft drink bottlers is to some extent seasonal. Even during the traditionally busy seasons employment is sometimes erratic due to scheduling or procurement problems that often beset small firms whose daily operations depend upon spontaneous events in the market place. All firms interviewed reported some seasonal fluctuations in employment.

Except for a few equipment maintenance jobs, skill requirements are relatively low. The requisite proficiencies on most jobs can be attained within a very short time without seriously affecting production. Thus, the fluctuating employment in this industry is not a burdensome expense as is true of high-skill industries where temporary lay-offs usually result in the permanent loss of valuable employees. Except for a few females employed as poultry cutters and packers the workers are all male.

All firms reported complete satisfaction with both quality and quantity of labor. No particular need for special training was expressed by officials of the firms surveyed.

Lumber Industry. The lumber industry is similar to the food industry in Elbert County with regard to labor force characteristics. The wages are lower than in any other industry, which is typical throughout the South, and there are no standard fringe benefits. There is some need for vocationally trained cabinet builders.

#### Materials, Supplies and Services and Production

Granite Industry. Table 1 summarizes the quantity of major supplies consumed by the granite industry in 1961. These are minimum figures, being based on data obtained from the three dominant supply firms and four purchasing subsidiaries of granite manufacturers. These data represent over 90% of total expenditures made for supplies by the Elbert County granite industry, according to industry sources.

Other items consumed in lesser quantities include abrasive wheel disks (paper), polishing wheels and packaging materials such as corrugated cardboard and fiberboard.

Table 1  
MAJOR SUPPLIES CONSUMED BY GRANITE INDUSTRY  
(1961)

Abrasive grains (silicon carbide)	3,000 tons
Abrasive wheels	9,000 units
Gang saw blades	400 tons
Sand	1,000 tons
Sandblast stencils	8,000 rolls
Steel shot	2,000 tons
Stone sawing strand	12,000,000 feet

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The principal Georgia-produced item is the emery wheel used for polishing monuments. These are manufactured in Athens and West Point. Cardboard and fiberboard packaging materials are also procured from Georgia firms in Cedartown and Savannah. For the heavily consumed items, however, the industry must go to sources in the industrialized Midwest and Northeast. Except for a portion of the gang saw blade and stone sawing strand requirements supplied by a Birmingham firm, no major supplies come from sources in the Southeast. Several items are channeled through warehouses in Atlanta and other southeastern cities, but none are manufactured in these cities.

A newly constructed plant is beginning the production of steel shot in Elberton. Present plans are to supply the needs of the granite industry in the area and also to produce the smaller shot sizes used by foundries. As soon as technical problems are resolved, management expects to install facilities for the production of specialized castings and silicon carbide and aluminum oxide. The first manufacturing operation established for the primary purpose of serving the granite industry, this firm expects to widen its market area to include all firms in the Southeast that have a need for abrasives in their operations.

There is at least one professional monument designer in Elberton who services the manufacturers. Indications are that this area could be expanded to provide a wider range of services to more of the manufacturers than are currently being served. Although electric motor repair services are offered in Elberton, many firms carry their motors to Anderson, South Carolina for repair work. This may be an indication of a need for a broader range of

services, or perhaps the facilities of the shops in Elberton are not equipped to handle peak loads. There is an apparent need for a machine shop in Elberton to service the granite industry. Although some of the larger manufacturers have small machine shops in their plants that can handle miscellaneous repair work, most are not able to fabricate and erect structures for cranes and hoists and to participate in major repair on equipment modification projects.

Apparel and Textile Industries. The apparel and textile concerns depend to a great extent upon firms in Georgia and other southeastern states as a source for their raw materials and supplies. South Carolina and Alabama textile mills supply most of the cloth for the Elbert County apparel fabricating plants. Manufacturers in Winder, Athens and Augusta furnish waist banding, thread, buttons and packaging materials, making the finished product thoroughly southern and in some cases completely Georgian. Atlanta and Rome participate to some extent in this industry, especially in packaging materials. The cotton, nylon and rayon yarn used by the textile plant is bought on the open market by the division headquarters in Greenville, South Carolina, from a large number of suppliers throughout the country.

One manager was particularly disturbed about what he considered the high price of cardboard and printed cardboard boxes in Georgia. He claimed that printed boxes could be purchased and shipped from New York at one-half the price asked by Georgia suppliers.

Over 10,000 units per day are currently being produced by the apparel firms. This is considered a normal production rate for an eight-hour day. There are no plans to add a second shift or to lengthen the present eight-hour day. The textile firm works two eight-hour shifts, but considers a three-shift day normal and would like to operate on that basis.

Management is, in general, pleased with present sources of materials and supplies and sees no need for the development of additional sources. Two of the firms are relieved of the buying responsibility, having parent plants with centralized purchasing facilities that serve the branch plants. Thus, except for insignificant miscellaneous items, these plants have no choice as to which suppliers to patronize.

Food Industry. Over 60,000 bushels of corn per month are consumed by the poultry feed producers. A considerable portion of this corn comes from south Georgia, but the major sources are the inland ports such as Chattanooga, Tennessee, and Guntersville, Alabama, where barges bring the corn in from the midwestern states. Soybean meal, which together with corn comprises over 80% of the total volume, comes from sources outside the state. Miscellaneous ingredients such as fish meal, alfalfa meal, phosphorus, corn glutone meal and inedible fat are also imported from without the state. South Carolina firms are looked to for many of the packaging supplies such as paper bags and tray-pak poultry wrapping materials. The poultry cutting and packaging firm brings in the broilers from Gainesville on its own trucks, cuts and packages them with the help of an automated assembly line, and distributes throughout the area with company trucks. These firms are apparently well satisfied with present sources of materials and supplies.

Lumber Industry. The lumber industry is currently producing lumber at an annual rate of 2,000,000 board feet. Some fir lumber has been imported from the West Coast but, in local management's opinion, it is not needed. Most of the pine and hardwood comes from Elbert and contiguous counties, but the ownership of approximately 30% of the timber land in Elbert County by large paper mills is causing some difficulty in local timber procurement.

#### Sales and Distribution

Granite Industry. The Elberton granite industry competes nationally with granite monument manufacturers in other granite producing areas of the country -- principally those in Vermont and Minnesota. Granite monuments are sold on a wholesale basis to retail monument dealers throughout the country. Annual granite sales volume in 1960 was \$13,500,000, of which 90% was monumental sales and the remaining 10% was in the newly developed building granite field.

In the past, the drop-off of sales during the winter months created a serious problem. It was often necessary to cut back production and lay off workers during the slack season. This seasonal sales problem has been alleviated to some extent by the generally accepted practice in the industry of offering June 1 billing on orders received during the winter months. The advantages of year-round production seem to outweigh the disadvantages of the practice, such as increased finished inventory and decreased working capital.

Except for the inventory the firms are forced to carry due to the delayed payment practice described above, monuments are produced to order and finished products are not inventoried.

Apparel and Textile Industries. Two of the firms in the apparel and textile industries ship their finished products direct to company warehouses for national distribution. No inventories are carried in the local plant except to the extent that is required to develop truck loads for shipment. Both firms have centralized sales offices outside Elbert County from which salesmen are dispatched to retailers throughout the United States. The third firm operates essentially as a contractor, shipping to his customer's orders. One New York firm absorbs more than 90% of this firm's output. Shipment is made by truck immediately after production. Since the product is highly stylized, fast production and shipment are essential. The market for this product is also national. The apparel producers operate at less than capacity during the winter months.

Food Industry. The principal poultry feed producers have captive markets for their output. Shipments are made by truck direct to the farmers who have contracted to raise the company-owned chicks. The market area, then, is restricted to those surrounding counties which can be economically served by truck. Some feed is shipped by rail to other distribution points in Georgia and South Carolina. This is not a regularly scheduled operation, however, occurring only when there is some slack in feed consumption in the Elbert County area.

The remaining firms in the poultry business sell direct to wholesalers and retailers in the area. The poultry packaging plant considers its market area to include the area within a 200 to 250 mile radius to the north and east of Elberton. No sales are made south or west of Elberton. No effort is made by the corn meal and feed producer to develop a market beyond the Elbert County border.

Lumber Industry. One of the firms in the lumber industry considers his market area as that which covers approximately a 25-mile radius from his plant location. Sales in this industry are, for the most part, restricted to local building contractors and homeowners. This industry does not figure prominently in the industrial structure of Elbert County, either in volume of sales or number employed.